Draft Individual Review Form

Proposal number: 2001-F213-1 **Short Proposal Title: SJR Dissolved Oxygen**

1a) Are the objectives and hypotheses clearly stated?
The objective is clearly stated: "… to produce an adaptive management plan that will lead to a substantial reduction or elimination of the oxygen depletion problem in the lower San Joaquin River during the fall." Work already performed under direction of the steering committee has led to a broad understanding of the conceptual model, with identification of four major management areas. The conceptual model appears relatively simple, but due to the complexity of the DO problem, there are multiple hypotheses. Seven upstream and seven downstream hypotheses are to be evaluated in this project.

1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?
There is clear written and graphical representation of the conceptual model. The conceptual model identifies four management areas: control of non-point sources, control of point sources, flow management, and aeration. The non-point and point sources both have a local and upstream component.

1b2) Is the approach well designed and appropriate for meeting the objectives of the project?
The primary objective of this research and monitoring project is to obtain information that can be used to develop and evaluate management measures to reduce or eliminate DO depletion in the lower SJR. A list of 19 sub tasks is presented to meet this objective. The references and hypotheses addressed for each of these sub tasks are clearly identified and it appears that the combined approach described in these sub tasks should be able to meet the objective. The relationship between each of the sub tasks, however, is not identified. Lack of a clear relationship and feedback between each of the sub tasks suggests that there may be insufficient adaptive research (e.g. there appears to be no mechanism to implement changes to sub tasks based upon preliminary results of a related sub task). The design appears to be appropriate for meeting the objectives but perhaps at the expense of some unneeded detailed analyses. Consideration of relationship between sub tasks could result in cost savings.

1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?
The dissolved oxygen problem in the Stockton Deep Water Ship Channel is complicated due to the variety of sources of oxygen demanding substances and the processes that affect these sources. This proposal has identified a long list of sources and processes that can have an affect on dissolved oxygen concentrations. The strategy of this proposal is to investigate all of them. Though all of them likely have some impact on dissolved oxygen concentrations, the relative magnitude of the impacts of these sources and processes will likely vary greatly depending upon flow regime and season. Perhaps not all will be of critical importance. This research and monitoring project will likely provide a comprehensive assessment of the relative magnitude of the sources and processes, but it is not clear that all facets of all of the sub tasks are necessary for the success of the project. Some of the Management Alternatives Evaluation Sub Tasks (Task 4) do not appear to directly address the hypotheses connected to them.

1c2) Is the project likely to generate information that can be used to inform future decision making?
This project will definitely provide a wealth of valuable information needed to understand the sources and processes that affect DO in the lower SJR. It will also provide information on some of the management alternatives needed to reduce loading of oxygen depleting substances or minimize affect of processes that contribute to oxygen depletion.

2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?
There is not much detail regarding the monitoring and information assessment plans for the applicable sub tasks but there is provision in the project proposal for completion of such plans

2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives?

There is sufficient provision for data handling and storage, and data reporting. Data will be available for public access on the IEP website. The proposal includes a provision to include all modeling tools on a CD-ROM for public distribution. There is provision for reporting of all project sub tasks.

3) Is the proposed work likely to be technically feasible?
The proposed work appears to be technically feasible. Little detail is provided in the proposal for most of the sub tasks but there are adequate references.

4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?
One of the major strengths of the proposal is that the project team draws from a wealth of expertise that will be able to effectively implement the proposed project. The team already has a track record of successfully investigating a wide range of technical problems.

Miscellaneous comments
The proposal lacks sufficient "adaptive research". It should be possible to make at least a partial assessment of the relative magnitude of sources and processes and importance of various management alternatives, without committing to the full project as proposed. The Administrative and Peer Review Panel should pare down or remove marginally useful sub tasks.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
☐ Excellent ■ Very Good ☐ Good ☐ Fair ☐ Poor	This is a very good proposal except for the lack of detail in the descriptions of most of the sub tasks. Given CALFED constraints on proposals, more detail was likely not possible given scope and complexity of the topic. Nonetheless, the proposal includes a depth and breadth of sub tasks that may be too far-reaching. An attempt should be made to pare down the current proposal to address only the sub tasks or portions of sub tasks that are immediately and most urgently needed to proceed with the goal of identifying the most important sources of oxygen demanding substances and development of the key management tools needed to reduce dissolved oxygen depletion. A strength of the Dissolved Oxygen Steering Committee is that it consists of an extensive network of scientists that can evaluate a wide range of technical issues. It is suggested that this strength be employed, via the Administrative and Peer Review panel, to pare down or remove marginally useful sub tasks. The panel should use "adaptive research" to make this a more efficiently implemented project.